

SECTION 3 Storage Devices and Media

Recommended Prior Knowledge Students will require basic experience of saving work using a desktop computer. This includes the use of hard discs, floppy discs and CD ROMs. They should know how to save files of information. They should have studied all the points in Section 1.

Context This section should be the third studied by the students.

Outline This section describes the storage devices which would be met by a student in studying a variety of IT systems and applications.

section	Learning Outcomes	Suggested Teaching Activities	Online Resources	Other resources
3a	Describe common backing storage media and their associated devices including: <ul style="list-style-type: none"> • magnetic tapes, • CD ROMs, • CD Rs, • CD RWs, • DVD ROMs, • DVD Rs, • DVD RWs, • floppy discs and hard discs, • Zip discs, • Jaz discs, • memory sticks, • flash memory. 	Have as many of the different media available as possible to demonstrate these.	http://www.jegsworks.com/Lessons/lesson6/lesson6-2.htm http://www.jegsworks.com/Lessons/lesson6/lesson6-8.htm http://www.jegsworks.com/Lessons/lesson6/lesson6-9.htm http://www.bbc.co.uk/schools/gcsebitesize/ict/hardware/1datastorage/1.shtml	(Walmsley, et. al., 2004, Chpts 3 & 7) (Leadbetter, & Wainwright, 2004, 13.6)
3b	Identify typical uses of the storage media, including types of access (e.g. serial/sequential, direct/random) and access speeds.	<ul style="list-style-type: none"> • Explain the use of each of the media. • Discuss which type of access (serial or direct) would be used by each device to access data on the media. • Give examples of the speed of data access of each one. 	http://www.jegsworks.com/Lessons/lesson6/lesson6-2.htm http://www.jegsworks.com/Lessons/lesson6/lesson6-8.htm http://www.jegsworks.com/Lessons/lesson6/lesson6-9.htm http://www.bbc.co.uk/schools/gcsebitesize/ict/hardware/1datastorage/1.shtml	(Walmsley, et. al., 2004, Chpts 3 & 7) (Leadbetter, & Wainwright, 2004, 13.6) CIE Information Technology 0418 Syllabus Document

section	Learning Outcomes	Suggested Teaching Activities	Online Resources	Other resources
3c	Describe the comparative advantages and disadvantages of using different backing storage media.	For each device give an example of when it might be used and give reasons why the other media/devices would not be suitable for that particular use.	http://www.jegsworks.com/Lessons/lesson6/lesson6-9.htm http://www.bbc.co.uk/schools/gcsebitesize/ict/hardware/1datastorage/1.shtml	(Walmsley, et. al., 2004, Chapter 3)
3d	Define the term backup and describe the need for taking backups.	Explain the implications of losing data.		(Leadbetter, & Wainwright, 2004, 2.6) (Walmsley, et. al., 2004, Chpts 3 & 9)
3e	Describe the difference between main/internal memory and backing storage, stating the relative benefits of each in terms of speed and permanence.	<ul style="list-style-type: none"> • Build on Sections 3a to 3c giving an idea of relative speeds of access and transfer of backing storage when compared with main memory. • Discuss the volatility of data in RAM when compared with ROM and backing storage. 	http://www.jegsworks.com/Lessons/lesson6/lesson6-1.htm http://www.bbc.co.uk/schools/gcsebitesize/ict/hardware/1datastorage/1.shtml	(Leadbetter, & Wainwright, 2004, 13.6) (Walmsley, et. al., 2004, Chpts 3 & 7)